UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 24 2006

Mr. Tom Duff
President
Optimus
161 East Grand Avenue
Chicago, Illinois 60611

REPLY TO THE ATTENTION OF: SE-5J

Subject: Review of the Optimus - 161 East Grand Avenue Radiation Screening, Phase 3 Final Report for Submission to EPA

Dear Mr. Duff:

Attached are the United States Environmental Protection Agency's (EPA) comments on the *"Optimus - 161 East Grand Avenue Radiation Screening, Phase 3 Final Report for Submission to EPA"* dated January 23, 2006. If you have any questions or concerns, please contact myself at (312)886-3601, or Eugene Jablonowski at (312) 886-4591.

Sincerely,

E Jablonowski for

Vanneta Simon
On-Scene Coordinator

Attachment

Comments on the
Optimus - 161 East Grand Avenue Radiation Screening, Phase 3 Final Report for Submission to EPA dated January 23, 2006

February 2006

1. This report states that the meter and detector combination used to collect data consisted of a Ludlum Model 2221 Scaler Ratemeter (meter) along with a Ludlum Model 44-10 Gamma Scintillator (detector). The Ludlum 2221 Scaler Ratemeter provides readings in counts per minute (cpm). The report also provides data/readings in micro-roentgen per hour (uR/hr), although there is not a meter reference that provides readings in "uR/h" units. The meter used to collect data in "uR/hr" units should be identified in the report.

2. The previous report dated September 21, 2005 stated data was collected with a meter and detector combination consisting of a Ludlum Model 3 Survey Meter (meter) with a Ludlum Model 44-2 Gamma Scintillation (detector). The Ludlum Model 3 Survey Meter reads in typically provides readings in units of milli-roentgen per hour (mR/hr), unless another meter dial is specified from the manufacturer for this meter. The data for the January 23, 2006 report was reported to have been taken with a Ludlum Model 2221 Scaler Ratemeter, which reads in cpm units, not "uR/hr" units as often stated throughout this report. The report should clarify which instruments were used to take readings in the units specified in this report: both "cpm" and "uR/hr." Also, the rationale for changing the survey meter used to collect data for the various reports should be explained.

3. The previous radiation survey report dated September 21, 2005 stated that the outdoor background ranged from 11 to 15 uR/hr. This report states background ranged from 1 to 15 uR/hr. The difference in these background readings should be clarified in this document.

   The outdoor data listed in Table 1 as 0.922 – 1.368 uR/hr appears to be the background data and seems unusually low, especially considering that comparable background readings in the September 21, 2005 report indicated that background ranged from 11 to 15 uR/hr. The differences between these background measurements should either be explained or corrected in this document. The January 23, 2006 report states that background ranges from 1 to 15 uR/hr. The only data that seems attributable to background is the "Outdoors" data in Table 1, although this data does not exceed 1.368 uR/hr and is an unusually low reading. There is no data between 1.368 and 15 uR/hr, so the stated background of 1 to 15 uR/hr should be explained.

4. Similarly, the background count rate data needs to be clarified in the January 23, 2006 report. The text states that background was measured as 900 – 13,500 cpm. On the other hand, the background "Outdoors" data in Table 1 only has a range of 830 – 1231 cpm. The differences between data provided generally in the document text versus the Table 1 values should be accounted for.

   Typically, in Streeterville environments, a 2" by 2" Sodium Iodide (NaI) detector's lowest background levels range from about 3000 to 4000 cpm. On the other hand, the background levels stated in the January 23, 2006 report never exceed 1231 cpm. The Environ background data appears to be notably lower than reasonably expected and an explanation should be provided in the report.

5. The data provided in this January 23, 2006 report appears to be very low, never exceeding 2.45 uR/hr, while background levels are at least 5 uR/hr typically. All of the data tabulated in this report (both background and screening data) appears to be much lower than typical background levels, so an explanation from Environ is warranted.

6. The uR/hr data is reported to 2 or 3 decimal digits (e.g., 0.74, 1.368). The micro-R meter that Environ reported using in their last two reports can only be read to whole number accuracy at best. This discrepancy should be addressed by Environ.

7. The data in Table 1 is under the headings "AVG. Reading (uR/hr)" and "AVG. Reading (CPM)." These indicate the readings are averages but the listed data is as a range. An explanation of what these readings represent and how they were taken is necessary and should be provided.

8. Nothing in the text indicates that Environ utilized the procedures the U.S. Environmental Protection Agency previously provided to Optimus in a memorandum titled "Performing a Gamma-Ray Survey." Environ should explain how they incorporated these procedures into their radiation screening.